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PTO/SB/21 (08-00)

Approval for use through 10/31/2002. OMB 0651-0031  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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# TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

8

Application Number

09/930,871

Filing Date

August 15, 2001

First Named Inventor

Turner

Group Art Unit

1645

Examiner Name

Not Yet Assigned

Attorney Docket Number

LEX-0216-USA

## ENCLOSURES (check all that apply)

☐ Fee Transmittal Form

☐ Fee Attached

☐ Amendment / Reply

☐ After Final

☐ Affidavits/declaration(s)

☐ Extension of Time Request

☐ Express Abandonment Request

☒ Information Disclosure Statement

☐ Certified Copy of Priority Document(s)

☐ Response to Missing Parts/  
Incomplete Application

☐ Response to Missing Parts  
under 37 CFR 1.52 or 1.53

☐ Assignment Papers  
(for an Application)

☐ Drawing(s)

☐ Licensing-related Papers

☐ Petition

☐ Petition to Convert to a  
Provisional Application

☐ Power of Attorney, Revocation  
Change of Correspondence Address

☐ Terminal Disclaimer

☐ Request for Refund

☐ CD, Number of CD(s) \_\_\_\_\_

Remarks

References Cited in (2) Binders

☐ After Allowance Communication  
to Group

☐ Appeal Communication to Board  
of Appeals and Interferences

☐ Appeal Communication to Group  
(Appeal Notice, Brief, Reply Brief)

☐ Proprietary Information

☐ Status Letter

☐ Other Enclosure(s) (please  
identify below):

- Return Postcard

- PTO1449 & 59 references cited

## SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm

Lexicon Genetics Incorporated

or

Individual name

Lance K. Ishimoto

Reg. No. 41,866

Signature

*Lance K. Ishimoto by David W. Hbler* **DAVID W. HBLER**  
**REG. NO. 41,071**

Date

December 7, 2001

## CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231 on this date: December 7, 2001

Typed or printed name

Michelle Klein

Signature

*Michelle Klein*

Date

December 7, 2001

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

19 2001

Applicant(s): Turner *et al.*

Application No.: 09/930,871

Filed: August 15, 2001

Group Art Unit: 1645

Title: Novel Human Ion Channel Proteins and  
Polynucleotides Encoding the Same

Examiner: Not Yet Assigned

Attorney Docket No.: LEX-0216-USA

Assistant Commissioner for Patents  
Washington, D.C. 20231  
Box DD

**INFORMATION DISCLOSURE STATEMENT**

Dear Sir:

This Information Disclosure Statement is submitted:

- ☒ under 37 CFR 1.97(b), or  
(Within three months of filing national application; or date of entry of international application; or before mailing date of first office action on the merits; whichever occurs last)
- ☐ under 37 CFR 1.97(c) together with either a:  
☐ Certification under 37 CFR 1.97(e), or  
☐ a \$240.00 fee under 37 CFR 1.17(p), or  
(After the CFR 1.97(b) time period, but before final action or notice of allowance, whichever occurs first)
- ☐ under 37 CFR 1.97(d) together with a:  
☐ Certification under 37 CFR 1.97(e), and  
☐ a petition under 37 CFR 1.97(d)(2)(ii), and  
☐ a \$130.00 petition fee set forth in 37 CFR 1.17(i)(1).  
(Filed after final action or notice of allowance, whichever occurs first, but before payment of the issue fee)

☒ Applicant(s) submit herewith Form PTO 1449-Information Disclosure Citation together with copies, of patents, publications or other information of which applicant(s) are aware, which applicant(s) believe(s) may be material to the examination of this application and for which there may be a duty to disclose in accordance with 37 CFR 1.56.

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Applicant submits that the above references taken in combination neither anticipate nor render obvious the present invention. Consideration of the foregoing in relation to this application is respectfully requested.

The Commissioner is hereby authorized to charge any additional fee required or credit any overpayment for this Information Disclosure Statement to Lexicon Genetics Deposit Account No. 50-0892. A copy of this sheet is enclosed.

It is requested that the information disclosed herein be made of record in this application.

Respectfully submitted,

12-7-01  
Date

REG. NO. 41,071  
DAVID W. HIBLER  
Lance K. Ishimoto by David W. Hibler  
Lance K. Ishimoto Reg. No. 41,866

LEXICON GENETICS INCORPORATED  
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(281) 863-3333

Substitute for form 1449A/PTO

**Complete if Known**

(use as many sheets as necessary)

<b>Applicati n Number</b>	09/930,871
<b>Filing Date</b>	August 15, 2001
<b>First Named Inv nt r</b>	Turner
<b>Group Art Unit</b>	1645
<b>Examiner Name</b>	Not Yet Assigned
<b>Attorney Docket Number</b>	LEX-0216-USA

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Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
	AA	4,215,051	0	Schroeder et al	07/29/80	
	AB	4,376,110	0	David et al	03/08/83	
	AC	4,594,595	0	Struckman	06/10/86	
	AD	4,631,211	0	Houghten	12/23/86	
	AE	4,689,405	0	Frank et al	08/25/87	
	AF	4,713,326	0	Dattagupta et al	12/15/87	
	AG	4,873,191	0	Wagner et al	10/10/89	
	AH	4,946,778	0	Ladner et al	08/07/90	
	AI	5,252,743	0	Barrett et al	10/12/93	
	AJ	5,424,186	0	Fodor et al	06/13/95	
	AK	5,445,934	0	Fodor et al	08/29/95	
	AL	5,459,127	0	Felgner et al	10/17/95	
	AM	5,556,752	0	Lockhart et al	09/17/96	
	AN	5,700,637	0	Southern	12/23/97	
	AO	5,744,305	0	Fodor et al	04/28/98	
	AP	5,837,458	0	Minshull et al	11/17/98	
	AQ	5,869,336	0	Meyer et al.	02/09/99	
	AR	5,877,397	0	Lonberg et al	03/02/99	
	AS	5,948,767	0	Scheule et al.	09/07/99	
	AT	6,075,181	0	Kucherlapati et al	06/13/00	
	AU	6,110,490	0	Thierry	08/29/00	
	AV	6,150,584	0	Kucherlapati et al.	11/21/00	

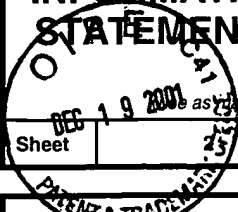
Examiner Signature		Date Considered	
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<sup>1</sup> Unique citation designation number. <sup>2</sup> See attached Kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

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Substitute for form 1449B/PTO		<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> 		<b>Application Number</b>	09/930,871
		<b>Filing Date</b>	August 15, 2001
		<b>First Named Inventor</b>	Turner
		<b>Group Art Unit</b>	1645
		<b>Examiner Name</b>	Not Yet Assigned
		<b>Attorney Docket Number</b>	LEX-0216-USA
Sheet	19	of	3

**OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No.†	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number, publisher, city and/or country where published.
	AW	Bird et al, 1988, "Single-Chain Antigen-Binding Proteins", Science 242:423-426. ●
	AX	Bitter et al, 1987, "Expression and Secretion Vectors for Yeast", Methods in Enzymology 153:516-544. ●
	AY	Colbere-Garapin et al, 1981, "A New Dominant Hybrid Selective Marker for Higher Eukaryotic Cells", J. Mol. Biol. 150:1-14. ●
	AZ	Gautier et al, 1987, "α-DNA IV: α-anomeric and β-anomeric tetrathymidylates covalently linked to intercalating oxazolopyridocarbazole. Synthesis, physicochemical properties and poly (rA) binding", Nucleic Acids Research 15(16):6625-6641. ●
	BA	Gordon, 1989, "Transgenic Animals", International Review of Cytology, 115:171-229. ●
	BB	Greenspan et al, 1993, "Idiotypes: structure and immunogenicity", FASEB Journal 7:437-444. ●
	BC	Gu et al, 1994, "Deletion of a DNA Polymerase β Gene Segment in T Cells Using Cell Type-Specific Gene Targeting", Science 265:103-106. ●
	BD	Huse et al, 1989, "Generation of a Large Combinatorial Library of the Immunoglobulin Repertoire in Phage Lambda", Science 246:1275-1281. ●
	BE	Huston et al, 1988, "Protein engineering of antibody binding sites: Recovery of specific activity in an anti-digoxin single-chain Fv analogue produced in Escherichia coli", Proc. Natl. Acad. Sci. USA 85:5879-5883. ●
	BF	Inoue et al, 1987, "Sequence-dependent hydrolysis of RNA using modified oligonucleotide splints and RNase H", FEBS Letters 215(2):327-330. ●
	BG	Inoue et al, 1987, "Synthesis and hybridization studies on two complementary nona(2'-O-methyl)ribonucleotides", Nucleic Acids Research 15(15):6131-6149. ●
	BH	Inouye & Inouye, 1985, "Up-promoter mutations in the lpp gene of Escherichia coli", Nucleic Acids Research 13(9):3101-3110. ●
	BI	Janknecht et al, 1991, "Rapid and efficient purification of native histidine-tagged protein expressed by recombinant vaccinia virus", PNAS 88:8972-8976. ●
	BJ	Kohler & Milstein, 1975, "Continuous cultures of fused cells secreting antibody of predefined specificity", Nature 256:495-497. ●
	BK	Lakso et al, 1992, "Targeted oncogene activation by site-specific recombination in transgenic mice", Proc. Natl. Acad. Sci. USA 89:6232-6236. ●
	BL	Lavitrano et al, 1989, "Sperm Cells and Vectors for Introducing Foreign DNA into Eggs: Genetic Transformation of Mice", Cell 57:717-723. ●
	BM	Lo, 1983, "Transformation by Iontophoretic Microinjection of DNA: Multiple Integrations without Tandem Insertions", Mol. & Cell. Biology 3(10):1803-1814. ●
	BN	Logan et al, 1984, "Adenovirus tripartite leader sequence enhances translation of mRNAs late after infection", Proc. Natl. Acad. Sci. USA 81:3655-3659. ●
	BO	Lowy et al, 1980, "Isolation of Transforming DNA: Cloning the Hamster aprt Gene", Cell 22:817-823. ●
	BP	Morrison et al, 1984, "Chimeric human antibody molecules: Mouse antigen-binding domains with human constant region domains", Proc. Natl. Acad. Sci. USA 81:6851-6855. ●
	BQ	Mulligan & Berg, 1981, "Selection for animal cells that express the Escherichia coli gene coding for xanthine-guanine phosphoribosyltransferase", Proc. Natl. Acad. Sci. USA 78(4):2072-2076. ●
	BR	Neuberger et al, 1984, "Recombinant antibodies possessing novel effector functions", Nature 312:604-608. ●
	BS	Nisonoff, 1991, "Idiotypes: Concepts and Applications", J. of Immunology 147:2429-2438. ●
	BT	O'Hare et al, 1981, "Transformation of mouse fibroblasts to methotrexate resistance by a recombinant plasmid expressing a prokaryotic dihydrofolate reductase", Proc. Natl. Acad. Sci. USA 78(3):1527-1531. ●

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Substitute for form 1449B/PTO				<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)				<b>Application Number</b>	09/930,871
				<b>Filing Date</b>	August 15, 2001
				<b>First Named Inventor</b>	Turner
				<b>Group Art Unit</b>	1645
				<b>Examiner Name</b>	Not Yet Assigned
<b>Sheet</b>	<b>3</b>	<b>of</b>	<b>3</b>	<b>Attorney Docket Number</b>	LEX-0216-USA

## OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	BU	Ruther et al, 1983, "Easy identification of cDNA clones", EMBO Journal 2(10):1791-1794. ●	
	BV	Santerre et al, 1984, "Expression of prokaryotic genes for hygromycin B and G418 resistance as dominant-selectable markers in mouse L cells", Gene 30:147-156. ●	
	BW	Sarin et al, 1988, "Inhibition of acquired immunodeficiency syndrome virus by oligodeoxynucleoside methylphosphonates", Proc. Natl. Acad. Sci. USA 85:7448-7451. ●	
	BX	Smith et al, 1983, "Molecular Engineering of the Autographa californica Nuclear Polyhedrosis Virus Genome: Deletion Mutations within the Polyhedrin Gene", J. Virol. 46(2):584-593. ●	
	BY	Stein et al, 1988, "Physicochemical properties of phosphorothioate oligodeoxynucleotides", Nucleic Acids Research 16(8):3209-3221. ●	
	BZ	Szybalska & Szybalski, 1962, "Genetics of Human Cell Lines, IV. DNA-Mediated Heritable Transformation of a Biochemical Trait", Proc. Natl. Acad. Sci. USA 48:2026-2034. ●	
	CA	Takeda et al, 1985, "Construction of chimaeric processed immunoglobulin genes containing mouse variable and human constant region sequences", Nature 314:452-454. ●	
	CB	Thompson et al, 1989, "Germ Line Transmission and Expression of a Corrected HPRT Gene Produced by Gene Targeting in Embryonic Stem Cells", Cell 56:313-321. ●	
	CC	Van Der Putten et al, 1985, "Efficient insertion of genes into the mouse germ line via retroviral vectors", Proc. Natl. Acad. Sci. USA 82:6148-6152. ●	
	CD	Van Heeke et al, 1989, "Expression of Human Asparagine Synthetase in Escherichia coli", J. Biol. Chemistry 264(10):5503-5509. ●	
	CE	Ward et al, 1989, "Binding activities of a repertoire of single immunoglobulin variable domains secreted from Escherichia coli", Nature 341:544-546. ●	
	CF	Wigler et al, 1977, "Transfer of Purified Herpes Virus Thymidine Kinase Gene to Cultured Mouse Cells", Cell 11:223-232. ●	
	CG	Wigler et al, 1980, "Transformation of mammalian cells with an amplifiable dominant-acting gene", Proc. Natl. Acad. Sci. USA 77(6):3567-3570. ●	

Examiner Signature	Date Considered
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

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